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## SMART WEBSITE FOR DRIVER AND FIRMWARE DOWNLOAD

HP INC

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## Smart Website for Driver and Firmware Download

### Abstract:

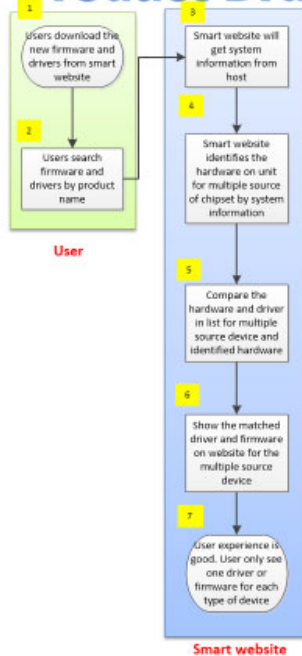
The multiple sources of chipset on the same product is a trend due to chipset shortage. But the multiple sources will cause bad user experience when user downloads the drivers and firmware from website. Users see the multiple drivers and firmware for the same type of device because multiple sources of chipset. For example, we use the Conexant audio chipset or Realtek audio chipset on the same notebook. It can prevent the notebook stop shipping if Conexant audio chipset is shortage. But user will see the two audio drivers for his unit and user doesn't know which audio chipset on his unit. The user experience is bad when user downloads the driver from website. We provide Smart Website for Driver and Firmware Download (SWDFD). The smart website will detect the system information and hardware configuration on the unit when user search the drivers and firmware from website. The website only shows the correct driver and firmware on website for user to download. It can improve the user experience

### Design Construction:

- HW: No addition hardware design.
- SW: Smart website identifies the hardware on unit for multiple sources of chipset by system information. The hardware list for this host is saved when the unit is production from factory. Smart website can get the hardware list by the serial number. Compare the hardware and driver in list for multiple source device and identified hardware. Show the matched driver and firmware on website for the multiple source device.

## &lt; Flow Chart and Block Flow Diagram &gt;

## Product Drawing



**Step1: User :** Users download the new firmware and drivers from smart website.

**Step2: User:** Users search firmware and drivers by product name.

**Step3: Smart website:** Smart website will get system information from host. The web page is in smart website is created by JavaScript. Smart website can get system information on host by JavaScript when user loads web page. You can see the detail in below link. We can also get the serial number from the system information.

<http://jayadevjyothi.blogspot.com/2013/02/getting-bios-information-using.html>

The smart website can use JavaScript to get hardware on unit directly by another method. You can see more information in below link.

<https://gist.github.com/rikkiloades/9738273>

**Step4: Smart website :** Smart website identifies the hardware on unit for multiple source of chipset by system information. The hardware list for this host is saved when the unit is production from factory. Smart website can get the hardware list by the serial number. You can see the example in next page.

**Step5: Smart website :** Compare the hardware and driver in list for multiple source device and identified hardware. You can see the example in next page.

**Step6: Smart website :** Show the matched driver and firmware on website for the multiple source device. You can see the example in next page.

**Step7: Smart website :** User experience is good. User only see one driver or firmware for each type of device.

## Product Drawing

The user1 and user2 use the same production "HP ZBook Firefly 15 G8". But different unit with different serial number. The smart website can get the serial number on the unit by JavaScript when loads web page. The smart website will get the hardware list for user1's unit and user2's unit by serial number. You can the Hardware list for unit 1 and unit 2 as follows. The audio, smart card reader and network are different on user1's unit and user2's unit due to multiple source of chipset. The website has the all drivers for production HP ZBook Firefly 15 G8. The website will compare the identified hardware on user's unit and driver list and then only show the match driver on user's unit for user to download. You can see the drivers for user1 and user2 are different as below table.

**Identified hardware for user1's unit and user2's unit by serial number:**

Unit	Production	Serial number	CPU	Graphic	Audio	Smart Card Reader	Network
User1	HP ZBook Firefly 15 G8	5CG0514F0J	Intel i7	Nvidia T500	Conexant	Alcor	Intel
User2	HP ZBook Firefly 15 G8	6FC0567G0K	Intel i7	Nvidia T500	Realtek	Realtek	Realtek

**Drive list for production HP ZBook Firefly 15 G8 in website:**

Production	CPU driver	Graphic driver	Audio driver1	Audio driver2	Smart Card Reade driver1	Smart Card Reade driver2	Network driver1	Network driver2
HP ZBook Firefly 15 G8	Intel	Nvidia	Conexant	Realtek	Alcor	Realtek	Intel	Realtek

**Drivers show to user on web after identified hardware and driver list for multiple source device compare:**

Unit	CPU	Graphic driver	Audio driver	Smart Card Reade driver	Network driver
User1	Intel	Nvidia	Conexant	Alcor	Intel
User2	Intel	Nvidia	Realtek	Realtek	Realtek

### **Business Strategy/Advantages**

- The smart website will detect the system information and hardware configuration on the unit when user search the drivers and firmware from website. The website only shows the correct driver and firmware on website for user to download. It can improve the user experience.
- The multiple sources of chipset are good for business. But we don't want user aware there are multiple sources of chipset on the same product. User may compare the difference for the chipset and then just want to buy specific vendor for the chipset on the product. It will increase the complex for the marketing and sales. The smart website can prevent user to aware the multiple sources of chipset on the same product. It can reduce the complex for the marketing and sales.

*Disclosed by Rich Hsia, Tom Hung, Patrick Chen, HP Inc.*